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NIOSH

NIOSH CBRN SCBA

Training Aid

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6 Have a plan for the decontamination and disposal of contaminated CBRN SCBA.

The 6.0 hour continuous use life concept includes the decontamination and disposal of CBRN SCBA following use in a chemical warfare agent (CWA) environment of nerve or blister agents (see section 5 of this poster).

If known CWA contamination is present on the CBRN SCBA, the recommended action is to quickly conduct gross decontamination using all available systems such as ladder pipe decon or emergency decon corridor operations, high volume, low pressure, clean water, to remove surface CBRN agent contamination. Certain CBRN agents will not be neutralized while others will be hydrolyzed or diluted while being physically washed off equipment surfaces. Contamination avoidance, mitigation and decontamination practices should be planned out and trained for in advance.

Confirmed CBRN contaminated SCBA equipment must be discarded in accordance with regulatory HAZWOPER operations. Users should ensure known or potential CBRN SCBA are triple bagged in plastic, labeled with type of agent or agents contaminated with, the amount/type of decontamination solution and technique used to conduct gross decontamination. Amount of exposure time for the contaminated SCBA and amount of CBRN contamination is also beneficial information relative to disposal. Local and state disposal procedures for specific CBRN agent contamination should be followed.

A decontamination method specific to the type of CBRN contamination type present may contribute to the efficacy of decontamination operations. SCBA contaminated with liquid CWA agents require disposal after decon.

Some descriptive text or explanation of what this booklet is about goes here...

Law enforcement CBRN emergency response team (ERT), circa 2000. Courtesy of Scott Health and Safety.

Research to Practice Through Partnerships

1 ***Make sure the CDC NIOSH CBRN Agent Approved adhesive label is on the Respirator back frame! If the label is scratched or unreadable, confirmation of the CBRN protection should be made with the manufacturer or NIOSH.***

Example of a CDC NIOSH CBRN Agent Approved adhesive label.

The label may say 'Retrofit' if the SCBA was a previously deployed non-CBRN SCBA which was later upgraded to CBRN Protection Status.

Example of a CDC NIOSH CBRN Agent Approved Retrofit adhesive label.

5 ***Read and understand the manufacturer's user instructions (UI) for guidance specific to your model of CBRN SCBA. The UI are included with the purchase of every new CBRN SCBA. The UI typically includes guidance on the following:***

- Pre-use and in-use checks of the operation of components and accessories
- Donning and doffing procedures
- Fit-testing and user seal checks (fit-checks)
- Unit assembly
- Pre-use checks for system leakage
- Breathing air cylinder inspection and exchange
- Maintenance, cleaning, and storage
- Cautions and warning statements unique to your respirator model
- Inspection of facepiece components and accessories
- Inspection of back frame and harness assembly
- Inspection of cylinder valve assembly function
- Inspection of cylinder gauge function and that cylinder is fully pressurized for use
- How to verify that the hydrostatic test date of the cylinder is current
- Checks of regulator function (both first stage and second stage regulators)
- Checks of function of all end-of-service-time-indicators (EOSTIs)
- Checks of function of heads-up-display (HUD), if present
- Check of integrity of hoses for damage, and that hose connections are tight
- Check of function of personal alert safety systems (PASS) (if present)
- Checks for unique parts labeled CBRN by the manufacturer and how to ensure they are compliant with the appropriate user instructions and NIOSH CBRN paper label insert

4 *Understand the 6.0 Hour Use-Life concept in a Chemical Warfare Agent (CWA) Environment pertaining to NIOSH cautions and limitations 'T' and 'U'.*

When a CBRN SCBA is used in a CWA environment containing blister agents or nerve agents in vapor, aerosol, or liquid form, a use limitation of 6.0 continuous hours beginning at the time of a confirmed exposure applies, after which the CBRN SCBA must be decontaminated and disposed of.

Calibrated instruments designed to detect with redundancy, selectivity, and repeatability, at known limits of detection should be available for use on the terrorism site to determine if chemical warfare agents are present. Final agent identification is contingent upon findings from lead federal agency. Local and state public health laboratories are expected to contribute to sampling chain of custody or final identification actions.

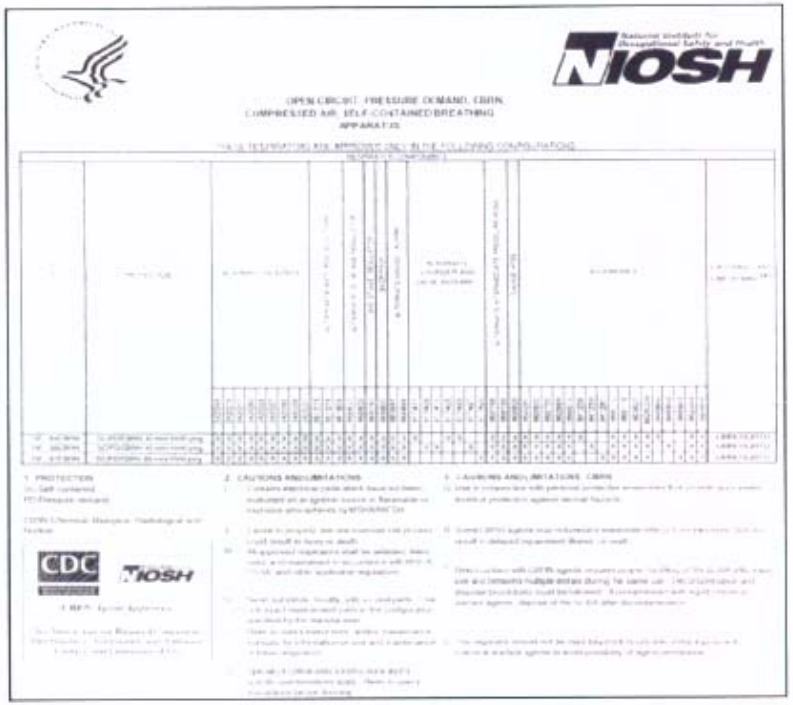
The 6-hour use life practice means six continuous hours in a single shift, day, or event. It does not mean six individual 1-hour exposures in one shift or one day, nor does it mean six different 1-hour exposures over the course of six different days.

Nerve agents include: GB (Sarin), GA (Tabun), GD (Soman), GF (cyclohexyl Sarin), and VX.

Blister agents include: HD (sulfur mustard), nitrogen mustard (HN-1, HN-2 and HN 3) and Lewisite (L, L-1, L-2 and L-3).

Some variations on this use life concept are possible based on the decision authority by the incident commander or the lead federal agency. Variations in the 6.0 hour use life concept may be necessary in the interest of victim rescue and recovery and the limited availability of new, uncontaminated CBRN SCBA at the site.

2 *Verify your CBRN SCBA is assembled with only the parts listed in the matrix of the NIOSH Approval Label below. It is found as a paper insert in the manufacturer's user instructions.*



Example of a NIOSH CBRN SCBA Approval label.

Actual back frame assembly with CDC and NIOSH CBRN Agent Approved label, NIOSH abbreviated harness sticker label and SEI compliance sticker label. All three labels are required for CBRN compliance.

3 *Understand the NIOSH cautions and limitations for CBRN SCBA.*

Cautions and Limitations

The following NIOSH cautions and limitations appear in ***Section 2*** of the NIOSH approval label:

- **I** Contains electrical parts, which have not been evaluated as an ignition source in flammable or explosive atmospheres by MSHA/ NIOSH.
- **J** Failure to properly use and maintain this product could result in injury or death.
- **M** All approved respirators shall be selected, fitted, used, and maintained in accordance with MSHA, OSHA, and other appli cable regulations.
- **N** Never substitute, modify, add, or omit parts. Use only exact replacement parts in the configuration as specified by the manufac turer.
- **O** Refer to user's instructions, and/or maintenance manuals for information on use and maintenance of these respirators.
- **S** Special or critical user's instructions and/or specific limitations apply. Refer to user's instructions before donning.

(Note: caution and limitation 'S' will only be on the NIOSH approval label if specified by the manufacturer in the user instructions. When 'S' appears on the NIOSH approval label, the corresponding cautions and limitations, that apply under 'S' will be explained in a designated section of the manufacturer's User Instructions (UI). Caution and limitation 'I' will not appear on units that have met the evaluation requirements by MSHA/ NIOSH for the criteria stated in 'I'.)

Cautions and Limitations

The following NIOSH cautions and limitations appear in ***Section 3*** of the NIOSH approval label, and apply specifically for use in CBRN environments.

- **Q** Use in conjunction with personal protective ensembles that provide appropriate levels of protection against dermal hazards.
- **R** Some CBRN agents may not present immediate effects from exposure, but can result in delayed impairment, illness, or death.
- **T** Direct contact with CBRN agents require proper handling of the SCBA after each use and between multiple entries during the same use. Decontamination and disposal procedures must be followed. If contaminated with liquid chemical warfare agents, dispose of the SCBA after decontamination.
- **U** The respirator should not be used beyond 6 hours after initial exposure to chemical warfare agents to avoid possibility of agent permeation.

Field deployed SCBA, minus cylinder, with CBRN SCBA upgrade kit attached and submitted for the NIOSH's NPPTL initial review. Notice the red vibra-alert label denoting it is a CBRN rated model as well as the harness assembly labels of showing NIOSH approval.